

ABSTRACT OF THE DISCLOSURE

A temperature measurement opening 30 is formed in a bottom portion of a process vessel 1 of a plasma etching apparatus, the 5 temperature measurement opening 30 having a size not allowing a radio frequency power with a high frequency applied on a susceptor 2 to leak outside. To an external side of the temperature measurement opening 30, a radiation thermometer 31 is attached. The radiation thermometer 31 detects an infrared ray 35 emitted from the inside 10 of a temperature measurement hole 32 formed on a rear face side of the susceptor 2 to measure the temperature of the susceptor 2.